

Title (en)
MOLDING MATERIAL, AND RESIN-ADHERED REINFORCED FIBER BUNDLE

Title (de)
FORMMATERIAL UND AN EINEM HARZ HAFTENDES VERSTÄRKTES FASERBÜNDEL

Title (fr)
MATIÈRE À MOULER, ET FAISCEAU DE FIBRES RENFORCÉES COLLÉ PAR UNE RÉSINE

Publication
EP 2371505 B1 20180425 (EN)

Application
EP 09834906 A 20091224

Priority

- JP 2009071373 W 20091224
- JP 2008329109 A 20081225
- JP 2008329110 A 20081225

Abstract (en)

[origin: EP2371505A1] A molding material comprising the following components (A) to (D) at the following ratios, in which the component (D) is bonded to a composite comprising the components (A) to (C) and the order in the weight average molecular weight is component (D) > component (B) > component (C) ; (A) 1 to 75 wt% of a reinforcing fiber bundle; (B) 0.01 to 10 wt% of a first propylene-based resin; (C) 0.01 to 10 wt% of a second propylene-based resin having carboxylate groups bound to the polymer chains thereof; and (D) 5 to 98.98 wt% of a third propylene-based resin (first aspect). A resin-adhered reinforcing fiber bundle, wherein a mixture comprising a first propylene-based resin (B) and a second propylene-based resin (C) is adhered to a reinforcing fiber bundle (A); the weight average molecular weight of the first propylene-based resin (B) is larger than the weight average molecular weight of the second propylene-based resin (C); the second propylene-based resin (C) is a propylene-based resin having carboxylate groups bound to the polymer chains thereof; the adhered amount of the mixture comprising the first propylene-based resin (B) and the second propylene-based resin (C) is in a range from 0.1 to 30 parts by weight per 100 parts by weight of the reinforcing fiber bundle (A) ; and the content of the second propylene-based resin (C) is 0.3 to 45 parts by weight per 100 parts by weight of the first propylene-based resin (B) (second aspect). A molding material of this invention provides a long fiber-reinforced thermoplastic resin molding material containing a propylene-based resin as the matrix resin, which allows the reinforcing fibers to be well dispersed into the molded article produced at the time of injection molding and allows the molded article produced to have excellent mechanical properties (first aspect). A resin-adhered reinforcing fiber bundle of this invention provides a resin-adhered reinforcing fiber bundle excellent in the adhesiveness between the matrix resin comprising a thermoplastic resin, particularly a polyolefin-based matrix resin and reinforcing fibers, and good in handling properties (second aspect).

IPC 8 full level
B29C 45/00 (2006.01); **C08L 23/10** (2006.01); **B29K 23/00** (2006.01); **B29K 105/06** (2006.01)

CPC (source: EP KR US)
B29B 7/88 (2013.01 - EP); **B29B 7/90** (2013.01 - EP); **B29B 11/16** (2013.01 - KR); **B29C 45/0001** (2013.01 - EP US); **B29C 45/0005** (2013.01 - EP US); **C08J 5/04** (2013.01 - KR); **C08K 7/02** (2013.01 - KR); **C08L 23/10** (2013.01 - EP KR US); **B29K 2023/12** (2013.01 - EP US); **B29K 2105/06** (2013.01 - EP US); **Y10T 428/2933** (2015.01 - EP US)

C-Set (source: EP US)
C08L 23/10 + C08L 2666/02

Cited by
EP2371897A4; EP4059995A4; US8530565B2; US10414884B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)
EP 2371505 A1 20111005; EP 2371505 A4 20150708; EP 2371505 B1 20180425; CN 102245362 A 20111116; CN 102245362 B 20141217; KR 101665737 B1 20161012; KR 20110098900 A 20110902; TW 201033258 A 20100916; TW I458764 B 20141101; US 2012015186 A1 20120119; US 9731440 B2 20170815; WO 2010074108 A1 20100701

DOCDB simple family (application)
EP 09834906 A 20091224; CN 200980149582 A 20091224; JP 2009071373 W 20091224; KR 20117011898 A 20091224; TW 98144645 A 20091224; US 200913138030 A 20091224